24. The computer network of claim 6 wherein the plurality of managed network elements include base managed network elements.

25. The computer network of claim 6 wherein the plurality of managed network elements include derived managed network elements.

26. The computer network of claim 6 wherein the plurality of managed network elements include application managed network elements.

27. The computer network of claim 6 wherein the plurality of managed network elements include resource managed network elements.

28. The computer network of claim 6 wherein the plurality of managed network elements include reference managed network elements.

29. The computer network of claim 6 wherein the plurality of managed network elements include external interface managed network elements.

30. The manager engine computer of claim 7 wherein the managed elements of the network include base managed elements.

31. The manager engine computer of claim 30 wherein the managed elements of the network include derived managed elements.

32. The manager engine computer of claim 31 wherein the managed elements of the network include application managed elements.

33. The manager engine computer of claim 32 wherein the managed elements of the network include resource managed elements.

34. The manager engine computer of claim 33 wherein the managed elements of the network include reference managed elements.

35. The manager engine computer of claim 34 wherein the managed elements of the network include external interface managed elements.

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36. A computer network, the computer network including a plurality of managed sites, each of the plurality of managed sites inlcuding a plurality of manager engien computers, each one manager engine computer of the plurality of manager engine computers coupled to a corresponding plurality of manage nodes, the manager engine computer comprising:

a. a management software component being capable of retrieving and storing data representative of network state information, the network state information comprising a subset of a plurality of managed network elements, wherein at least one of the susbet of the plurality of manage network elements represents at least one of the corresponding plurality of managed nodes; and

b. a managed element assignment manager software component, the managed element assignment manager software component facilitating assignment of the managed network elements among the plurality of manager engine computers using a load balancing formula, the load balancing algorithm incorporating load balancing parameters.

37. The computer network of claim 36 wherein the load balancing parameters inlcude a Mean Engine Load parameter.

38. The computer network of claim 36 wherein the load balancing parameters inlcude an Average Engine Load parameter.

39. The computer network of claim 36 wherein the load balancing parameters inlcude a Low Tide Mark parameter.

40. The computer network of claim 36 wherein the load balancing parameters inlcude a High Tide Mark parameter.

41. The computer network of claim 36 wherein the load balancing parameters inlcude a Low Water Mark parameter.

42. The computer network of claim 36 wherein the load balancing parameters inlcude a High Water Mark parameter.

43. The computer network of claim 36 wherein the manager engine computer further comprises a replciation manager software component, the replication manager software component facilitating synchronization among the plurality of manager engine of the stored data representative of network state information.

44. The computer network of claim 36 wherein the manager engine computer further comprises an audit software component, the audit software component being capable of storing in a log file

data representative of audit information about applications running on the corresponding plurality of managed nodes.

45. The computer network of claim 44 wherein the audit software component comprises an audit information producer component and an audit infrmation consumer component, the audit information producer component retrieving stored data in the log file and placing it in a shared buffer comprised of two queues, the audit inormation consumer component retrieving data from the shared buffer in response to reqeusts communicaterd from a client, wherein the audit nformation consumer component operates in a manner that is asynchronous relative to the operation of the audit information producer component.

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46. The computer network of claim 45 wherein the audit information consumer component continuously alternates among retrieving data from a first of the two queues while the audit information producer component places log file data in a second of the two queues and retrieving data from the second of the two queues while the audit information producer component placed log file data in the first of the two queues.

47. The computer network of claim 44 wherein the manager engine computer further comprises an engine to engine software component, the engine to engine software component facilitating the exchange of messages among the plurality of manager engine computers.

48. The computer network of claim 47 wherein each one message of the messages includes data representative of the destination engine of the message.

49. The computer network of claim 47 wherein each one message of the messages includes data representative of the source engine of the message.

50. The computer network of claim 47 wherein each one message of the messages includes data representative of the date the message was issued.

51. The computer network of claim 47 wherein the manager engine computer further comprises an election manager software component, the election manager software component facilitating the designation of one of the plurality of manager engine computers as a master engine computer.

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52. The computer network of claim 51 wherein the election manager software component desgnates the master engine computer by (a) generating a first random number identifier; (b) comparing the first random number identifier to other random number identifiers generated by other of the plurality of manager engine computers; and (c) self-assigning a master designation in the event the first random number identifier is greater than the other random number identifiers.

53. The computer network of claim 51 wherein the manager engine computer further comprises an engine monitoring manager component, the engine monitoring manager component facilitating the provision of heartbeat messages to other of the plurality of manger engine computers to signal the availbaility of the manager engine computer.

54. The computer network of claim 53 wherein the engine monitoring manager component is also capable of detecting heartbeat messages issued by other of the plurality of manager engine

computers to determine the availability of the other of the plurality of manager engine computers.

55. The computer network of claim 54 wherein the engine monitoring manager component is also capable of notifying the other of the plurality of manager engine computers of an engine failure among the other of the plurality of manager engine computers.

56. The computer network of claim 53 wherein the manager engine computer further comprises a message switch software component, the message switch software component facilitating the exchange of messages among software components in the manager engine computer.

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57. The computer network of claim 56 wherein the message switch software component comprises a routing table, a primary message storage list and a client information component.

58. The computer network of claim 57 wherein the message switch software component comprises a routing table, a primary message storage list and a client information component.

59. The computer network of claim 57 wherein the messages inlcude properties and corrsponding values, the properties and corresponding values inlcuding a priority property and corresponding numerical priority.

60. The computer network of claim 59 wherein the properties and corresponding values inlcude a source property and corresponding source string.

61. The computer network of claim 59 wherein the properties and corresponding values inlcude a destination property and corresponding destination string.

elements include external interface managed network elements.

62. A manager engine computer coupled to at least one client and a plurality of managed nodes, the plurality of managed nodes located in one of a plurality of managed sites comprising a network, the manager engine computer communicating with the plurality of managed nodes and storing data representative of network state information, the network state information being organized as a series of relationships among managed elements of the network, the manager engine computer comprising:

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a. a management software component, the management software component being capable of retrieving, analyzing and storing the data represntative of network state information organized as a series of relationships among managed elements of the network, and

b. a client interface software component, the client interface software component facilitating retrieval from the manager engine computer by the client of the stored data represntative of network state information organized as a series of relationships among managed elements of the network.

63. The manager engine computer of claim 62 wherein the management software component further comprises a root cause evaluation component, the root cause evaluation component facilitating detection of network problems using dependencies incorproated into the series of relationships among managed elements of the network.

64. The manager engine computer of claim 63 wherein the management software component further comprises a policy enforcement component, the policy enforcement component facilitating enforcement of network policies in response to a state change in a corresponding one of the managed elements of the network.

65. The manager engine computer of claim 64 wherein the managed elements of the network include base managed elements.

66. The manager engine computer of claim 65 wherein the base managed elements inlcude data representing an SQL server in the network.

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67. The manager engine computer of claim 64 wherein the managed elements of the network include derived managed elements.

68. The manager engine computer of claim 64 wherein the managed elements of the network include application managed elements.

69. The manager engine computer of claim 68 wherein the application managed elements include data representing a Customer Information Trachking System in the network.

70. The manager engine computer of claim 64 wherein the managed elements of the network include resource managed elements.

71. The manager engine computer of claim 70 wherein the resource managed elements include data representing a group of SQL servers in the network.

72. The manager engine computer of claim 64 wherein the managed elements of the network include reference managed elements.

73. The manager engine computer of claim 72 wherein the reference managed elements include data representing a root cause isolation.

74. The manager engine computer of claim 64 wherein the managed elements of the network include external interface managed elements.

75. The manager engine computer of claim 65 wherein the external interface managed elements include data representing a web aplication in the network.

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76. A manager engine computer coupled to at least one client and a plurality of managed nodes, the plurality of managed nodes located in one of a plurality of managed sites comprising a network, the manager engine computer communicating with the plurality of managed nodes and storing data representative of network state information, the network state information being organized as a series of relationships among managed elements of the network, the manager engine computer comprising:

a. a management software component, the management software component being capable of retrieving, analyzing and storing the data represntative of network state information organized as a series of relationships among managed elements of the network,

b. a client interface software component, the client interface software component facilitating retrieval from the manager engine computer by the client of the stored data

represntative of network state information organized as a series of relationships among managed elements of the network; and

c. a relational database storing the network state information, the relational database comprising:

i. a managed element table, the managed element table comprising data about managed elements of the network;

ii. a managed element relationship table, the managed element relationship table comprising data about possible relationships among the managed elements of the network; and

iii. a managed element type table, the managed element type table comprising data representative of type information for the managed elements of the network.

77. The manager engine computer of claim 76 wherein the management software component further comprises a root cause evaluation component, the root cause evaluation component facilitating detection of network problems using dependencies incorproated into the series of relationships among managed elements of the network.

78. The manager engine computer of claim 77 wherein the management software component further comprises a policy enforcement component, the policy enforcement component

facilitating enforcement of network policies in response to a state change in a corresponding one of the managed elements of the network.

79. The manager engine computer of claim 78 wherein the managed elements of the network include base managed elements.

80. The manager engine computer of claim 79 wherein the base managed elements include data representing an SQL server in the network.

81. The manager engine computer of claim 78 wherein the managed elements of the network include derived managed elements.

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82. The manager engine computer of claim 78 wherein the managed elements of the network include application managed elements.

83. The manager engine computer of claim 82 wherein the application managed elements include data representing a Customer Information Trachking System in the network.

84. The manager engine computer of claim 78 wherein the managed elements of the network include resource managed elements.

85. The manager engine computer of claim 84 wherein the resource managed elements include data representing a group of SQL servers in the network.

86. The manager engine computer of claim 78 wherein the managed elements of the network include reference managed elements.

87. The manager engine computer of claim 86 wherein the reference managed elements include data representing a root cause isolation.

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88. The manager engine computer of claim 78 wherein the managed elements of the network include external interface managed elements.

89. The manager engine computer of claim 88 wherein the external interface managed elements include data representing a web aplication in the network.

Respectfully submitted,

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